

S/020/61/136/004/025/026  
B016/B075

Legend to Table 1: 1) current number; 2) I;  
3) d, A.

Legend to Table 2: 1) components; 2) sum;  
3) sample no. 1; 4) wt%; 5) number of atoms;  
6) group; 7) sample no. 2.

| num<br>n. n. | I | d, A | num<br>n. n. | I  | d, A  |
|--------------|---|------|--------------|----|-------|
| 1            | 8 | 3.55 | 11           | 3  | 1.050 |
| 2            | 3 | 3.34 | 12           | 2  | 1.028 |
| 3            | 6 | 3.17 | 13           | 8  | 1.775 |
| 4            | 8 | 2.88 | 14           | 5  | 1.716 |
| 5            | 5 | 2.77 | 15           | 4  | 1.358 |
| 6            | 3 | 2.69 | 16           | 10 | 1.337 |
| 7            | 6 | 2.49 | 17           | 5  | 0.980 |
| 8            | 8 | 2.24 | 18           | 4  | 0.937 |
| 9            | 3 | 2.04 | 19           | 5  | 0.833 |
| 10           | 4 | 2.00 |              |    |       |
|              | 1 | 2    | 3            | 4  | 5     |

Card 5/5

KAPITONOVA, Yu. V.

"General principles of combinational design"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory  
(IFAC), Moscow, 24 Sep-2 Oct 1962.

S/021/62/000/012/005/018  
D251/D508

AUTHOR: Kapitonova, Yu.V.

TITLE: On the coding of abstract automata

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 12,  
1962, 1553-1555

TEXT: Following the work of V.M. Hlushkov (UMN, v. 16, no. 5, 3, 1961), the author considers the problem of the transition from abstract automata as regards coding. A finite n-state abstract automaton A is considered, composed of a system  $\mathcal{A}$  of elementary automata, the composition of which realizes the automaton A. The principle to be employed is that of coding neighboring states by neighboring sets of binary codes of length  $l$ . It is shown that a necessary and sufficient condition for A to be coded by a  $G_l$  code is that it belongs to the K-class of automata. Hence the formation of a coding algorithm is indicated.

ASSOCIATION: Instytut kibernetyky AN URSR (Institute of Cybernetics of the AS UkrSSR)

Card 1/2

On the coding of abstract automata

S/021/62/000/012/005/018  
D251/D308

PRESENTED: by V.M. Hlushkov, Academician

SUBMITTED: June 28, 1962

Card 2/2

L 11041-63 EWT(d)/FCC(w)/BDS/EEC-2. ASD/AFMDC/ESD-3/APGC  
Pg-4/Pk-4/Po-4/Pq-4 GG/IJP(C)  
ACCESSION NR: ATR0002151

8/29/23/62/000/000/0114/0120

75  
74

AUTHOR: Kapitonova, Yu. V.

TITLE: Synthesizing the finite abstract automata

SOURCE: Vyчислител'naya matematika i tekhnika; trudy\* aspirantov Instituta kibernetiki AN USSR. Izd-vo AN USSR, 114-120

TOPIC TAGS: finite abstract automaton, synthesizing automata

ABSTRACT: The abstract automaton ("black box") is defined; it is described by two matrices: an "automaton rectangular matrix" and an "output matrix." Two problems are considered: (1) synthesizing the abstract automaton on the basis of a regular event and (2) analyzing the abstract automaton. The first problem requires finding algorithms that represent disjunction, product, and iteration of events if the automata that represent individual members of the disjunction, product, and iteration are known. The article offers a solution of the above problem and claims that the new algorithms are particularly convenient when the automata representing the events are known, the events proper are unknown, and the automata representing the disjunction, product, and iteration of these unknown events are to be sought. The algorithms result in nonminimum automata and require a final minimization. Orig. art. has: 24 formulas.

Card 1/2, Association: Inst. of Cybernetics, Academy of Sciences UkrSSR

ACCESSION NR: AP3004962

S/0208/63/003/004/0755/0765

AUTHORS: Rabinovich, Z. L.; Kapitonova, Yu. V. (Kiev)

TITLE: General principles for synthesis of combinative schemes

SOURCE: Zhurnal vychisl. matematiki i matematich. fiziki, v. 3, no. 4, 1963,  
755-765TOPIC TAGS: combinative scheme, logical control, Boolean operation, efficient  
synthesis, algorithm, functional element, Boolean function, inverse relation,  
automatization, electronic scheme, logical operator

ABSTRACT: The existing methods of synthesis of logical schemes not containing inverse connections in fact treat only the first part of this problem, namely, composition and minimization of logical controls in Boolean operations. The remaining stages are: 1) expression of Boolean controls in a given system of operators; 2) guarantee of the required quality of the physical characteristics of the scheme; 3) comparison with variants of the scheme. Algorithms for 1), 2), and 3) would facilitate most efficient synthesis and open the way for its complete automatization via computers. In this article the indicated stages of synthesis are formalized. A general plan for synthesis of combinative schemes is presented,

Card 1/2

ACCESSION NR: AP3004962

and also a study is made of certain peculiarities of it with respect to an impulse-potential element of the structure as having the widest collection of functional elements. The basic principles of the method are first considered, and then the algorithm is formulated. "This work was discussed in a seminar on the theory of automata and computing machines in the Institut Kibernetiki AN USSR (Institute for Cybernetics, AN UkrSSR), conducted by V. M. Glushkov. The authors express their unbounded gratitude to the leader of the seminar and its participants." Orig. art. has: 7 formulas.

ASSOCIATION: none

SUBMITTED: 20Aug62

ENCL: 00

SUB CODE: MA

NO REF SOV: 002

OTHER: 000

Card 2/2

GLUSHKOV, V.M., otv. red.; KUKHTENKO, A.I., zam. otv. red.;  
BLAGOVESHCHANSKIY, Yu.V., red.; DORODNITSYN, A.A., red.;  
YERSHOV, A.P., red.; LYAPUNOV, A.A., red.; MOSKALEV,  
I.S., red.; PUKHOV, G.Ye., red.; ROSTUNOV, T.I., red.;  
SAMOKHVALOV, K.G., red.; STOGNIY, A.A., red.; TIMOFEEV,  
B.B., red.; SHCHERBAN', A.N., red.; LETICHEVSKIY, A.A.,  
red.; KAPITONOV, Yu.V., red.; MEL'NIK, T.S., red.

[Problems of theoretical cybernetics] Voprosy teoreticheskoi kibernetiki. Kiev, Naukova dumka, 1965. 209 p.  
(MIRA 18:9)

1. Akademiya nauk UkrSSR, Kiev.

EWT(d)/EWF(v)/EWF(k)/EAF(h)/EAT(i), R1-4

ACCESSION NR: AP5012120

UR/0378/65/000/01/0040/0044

519.95

AUTHOR: Kapitonova, Yu. V.

TITLE: C-coding of abstract automata

SOURCE: Kibernetika, no. 1, 1965, 40-44

TOPIC TAGS: automaton coding, abstract automaton, C-coding, C-coding condition, automatic control device

ABSTRACT. Let a finite automaton  $A(n, m)$  have  $n$  states and  $m$  input symbols, and let a system of elementary automata  $\alpha$  be chosen whose combination realizes the automaton  $A$ .  $A$  is complete and all elementary automata entering  $\alpha$  have two states (0, 1). To avoid "chases" during the application of arbitrary codes to real systems, one must introduce appropriate limitations. The use of neighboring codes represents such a convenient limitation. Two different states  $a$  and  $b$  of  $A(n, m)$  are neighboring if either  $f(a, x) = b$  or  $f(b, y) = a$ , where  $a, b \in \gamma$ ,  $x, y \in X$ ,  $f(a, x)$  are transition functions, and  $\gamma$  and  $X$  are sets of states and of input symbols of the automata  $A(n, m)$  respectively. Two different nodes  $\alpha$  and  $\beta$  of length 1 are neighboring if they differ in exactly one symbol. Then the automaton  $A(n, m)$  is then C-coded if and only if

L 54570-65  
ACCESSION NR. AP5012120

notes. If the codes are of length 1, the automaton is C-coded. The present notes give necessary and sufficient conditions for the C-coding of an automaton. The results have been established and published in the author's thesis. The author has been established and published in the author's thesis. The author thanks A. A. Letuchevskiy for his help in the course of the investigation." Orig. art. has 8 formulas, 4 theorems and 10 figures.

SEARCHED BY: None

ENCL: 00 SUB CODE: PP

SUBMITTED: 27oct64

OTHER: 000

NO RFF SOV: 004

Card 2/2

ACC-NR: AT6010530

REF ID: A610530  
RR/GG/GD

SOURCE CODE: UR/0000/65/000/000/0035/0041

AUTHOR: Andon, F. I.; Brona, I. I.; Voytova, Ye. L.; Kapitonova, Yu. V.

ORG: none

TITLE: A small system for the projection of digital automaton circuits 16SOURCE: AN UkrSSR. Voprosy teoreticheskoy kibernetiki (Problems in theoretical cybernetics).  
Kiev, Naukova dumka, 1965, 35-41

TOPIC TAGS: digital computer, automaton, circuit design, Boolean algebra

ABSTRACT: The authors discuss the synthesis of logical devices, consisting in the construction of a reliable functional system to satisfy specific requirements imposed on the device. Almost all the terms and concepts used by the authors are taken from V. M. Glushkov's book (Sintez tsifrovyykh avtomatov. Fizmatgiz, M., 1962). The synthesis problem, as it applies to a specific case, is formulated as follows: on the basis of a prescribed mapping a functional arrangement is constructed having prescribed characteristics. The program system which solves this problem (a small automation system for the projection of digital automaton arrangements) is described in detail. The entire process of device synthesis is divided into the following six stages: 1) testing of the mapping for automaticity; 2) synthesis (in the case of automaton

Card 1/2

ACC NR: AT6010530

mapping) of the flow matrix of the complete abstract automaton according to the mapping; 3) minimization of the abstract automaton; 4) structural synthesis of the abstract automaton with "delay" type elements (coding and derivation of the Boolean functions for excitation and outputs); 5) minimization of the Boolean functions in normal form; and 6) conversion of the Boolean functions to a system of generalized Scheffer stroke writing and construction of the functional arrangement. Algorithms are described for each synthesis stage.

SUB CODE: 09 / SUBM DATE: 27Aug65 / ORIG REF: 005 / OTH REF: 001

Card 2/2 vmb

KAPITONOV A, Z.D.

Effect of local x-irradiation on bone marrow iron content and metabolism. Vop. med. khim. 5 no.1:32-38 Ja-P '59. (NIMA 12:3)

1. Chair of Biological Chemistry, The "S.M. Kirov" Institute for Postgraduate Medical Training, Leningrad.  
(BONE MARROW, metabolism,  
iron, eff. of x-rays (Rus))  
(IRON, metab.  
bone marrow, eff. of x-rays (Rus))  
(ROENTGEN RAYS, eff., etc.  
on bone marrow iron metab. (Rus))

UL'YANOV, I.A., inzh.; SOLDATENKOV, A.P., inzh.; DMITRIYEV, V.K.,  
inzh.; MASKIN, M.G., inzh.; POZIGUN, L.V., inzh.;  
DUKTOVSKAYA, O.A., inzh.; CHEKUNOV, I.N., inzh.; LIOKUMOVICH,  
Ye.F., inzh.; KAPITONCVA, Z.I., inzh.; LEVITSKIY, Ya.B., otv.  
red.; ROMANOVA, L.A., red. izd-va; OVSEYENKO, V.G., tekhn.red.

[Coals of the U.S.S.R.] Ugli SSSR; spravochnik. Moskva, Gos  
gortokhizdat, 1962. 318 p. (MIRA 15:11)  
(Coal)

BEREZOVSKIY, B.A.; BYKOVA, R.T.; GRIGOROVICH, Ye.V.; KAPITOVA, R.M.; SHRAMKO, L.I.

Treatment of tuberculosis with phthivazid. Vrach.delo no.12:1307  
D '56.  
(MIRA 12:10)

1. Kafedra fakul'tetskoy terapii (zav. - prof.B.S.Shklyar)  
Vinnitskogo meditsinskogo instituta i Vinnitskiy oblastnoy  
tuberkulesnyy gospital'.  
(TUBERCULOSIS) (NICOTINIC ACID)

KAPITSA, A. A.

Crustal movements in the Sakhalin region between the upper Cretaceous and Paleogene epochs. Izv. AN SSSR. Ser. geol. 25 no.2:107-108 p '60.  
(Sakhalin--Geology)

KAPITSA, A.A.

Main geomorphological and structural features of Sakhalin, its tectonic history and regionalization. Trudy VNIGRI no.224,256-278 '63.  
(MIRA 17:2)

KAPITSA, A.P., kand. geograf. nauk (Moskva)

"Our unknown planet; results of the International Geophysical Year" by B.I. Silkin, V.A. Troitskaya, N.V. Shebalin. Reviewed by A.P. Kapitsa. Priroda 52 no.2:121-123 '63. (MIRA 1642)  
(International Geophysical Year, 1957-1958)  
(Earth) (Silkin, B.I.) (Troitskaya, V.A.)  
(Shebalin, N.V.)

KAPITSA, A.P., kand. geograf. nauk; SOROKHTIN, O.G., kand. fiziko-matem.  
nauk

Measurements of the thickness of the ice sheet during the  
trip along the route Vostok-Molodeschnaya. Inform. biul. Sov.  
antark. eksp. no.51:19-22 '65.

Relief of the ice sheet and subglacial floor of Queen Maud  
Land. Ibid.:23-26 (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet (for Kapitsa).
2. Devyataya sovetskaya antarkticheskaya ekspeditsiya (for  
Sorokhtin).

KAPITSA, A.P.

Sketches on the geography of the Antarctic. Geog. v shkole 26  
no.2:15-25 Mr-Ap '63. (MIRA 16:4)

(Antarctic regions--Physical geography)

ECON/GEOPHYSICS - Geography of Rivers

**Kapitsa, A. P.**  
Card 1/1 : Pub. 129-15/25

FD-1690

Author : Makkaveyev, N. I.; Kapitsa, A. P.; and Khmaleva, N. V.

Title : Experimental investigation of the processes governing the development of the longitudinal profile of a river (preliminary account)

Periodical : Vest. Mosk. un., Ser. fizikomat. i yeast. nauk, Vol. 10, 139-152, Feb 1955

Abstract : The author attempts to establish the influence, upon the development of the longitudinal profile and upon the formation of terraces of river valleys, of variations of saturation of streams by alluvia; to investigate the peculiarities of the variations for fluctuations of the principal basis of erosion of a river system and the form of the terraces occurring under these conditions; and to determine the nature of the influence upon the longitudinal profile of reservoirs constructed in the middle reaches of the river. No references.

Periodical : Chair of Geomorphology

Submitted : October 26, 1954

KAPITSA, A.P.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,  
15-57-7-10034  
p 190 (USSR)

AUTHOR: Kapitsa, A. P.

TITLE: A Profile Graph for Sketching Horizontal Profiles  
(Profilograf dlya chercheniya profiley po gorizontalyam)

PERIODICAL: Uch. zap. Mosk. un-ta, 1956, Nr 182, pp 203-209

ABSTRACT: The construction and principles of operation of profile graphs are explained. This simple device permits one to construct a profile, increasing it 2 to 2.5 times, while enlarging maps directly on white paper, and avoiding the stage of constructing the profile on paper with a millimeter grid. The use of the profile graph increases the rate of drawing the profile 2 to 2.5 times and improves the accuracy of the construction several times.

Card 1/1

A. L. Knipper

KAPITSA, A.P., Cand Geog Sci -- (diss) "Dynamics of the  
rim section <sup>of the ice cover of East</sup> ~~Antarctica~~ in  
the region of operation of the First Complex Antarctic  
Expedition of the Academy of Sciences USSR in 1956-7." Mos,  
1958, 12 pp (Mos Order of Lenin and Order of Labor Red  
Banner State Univ im M.V. Lomonosov. Geog Faculty)  
100 copies (KL, 23-58, 102)

KAPITSA, A.P.

PAGE 1 BOOK INFORMATION

MAY/23/55

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3.9000

80392  
SOV/169-59-4-3231

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 4, p 5 (USSR)

AUTHOR: Kapitsa, A.P.

TITLE: On the Dependence of the Form of the Ice Dome in the Eastern Antarctic on the Relief of the Subglacial Bed and on the Character of the Ice Spreading

PERIODICAL: Inform. byul. Sov. antarkt. ekspeditsii, 1958, Nr 1, pp 41-45

ABSTRACT: The Brigal'skiy island and a series of other islands in the Antarctic represent ice domes lying on plane banks. The form of the dome is conditioned by the stringy-plastic character of the ice-spread. The curve of the dome profile must be expressed in this case by the formula:

$$\frac{h}{H_0} = \sqrt{1 - \frac{r^2}{R^2}}$$

where  $h$  is the ice thickness at a distance equal to the radius  $r$ ,  $H_0$  is the thickness of the ice in the center, and  $R$  is the entire radius of the dome. It is shown that the calculated and the actual profiles well coincide. Based on this fact, the

Card 1/2

4

80392  
SOV/169-59-4-3231

On the Dependence of the Form of the Ice Dome in the Eastern Antarctic on  
the Relief of the Subglacial Bed and on the Character of the Ice Spreading

calculation of the ice cover profile in the Eastern Antarctic is performed assuming that it has the form of a dome, the center of which is situated in  $25^{\circ}$  S lat. and to  $90^{\circ}$  E. long.. The calculated and actual profiles well coincide (with the exception of the outer zone). The discrepancy is explained by the great quantity of precipitates in the outer zone of the Eastern Antarctic. Such a coincidence of the profiles must point out the relatively plane bed of the ice formation in the Eastern Antarctic for the possible thickness of ice of 4000 m in the center. On the basis of the theory of the stringy-plastic ice-spread, the calculation of the spread velocity and of the ice discharge in the Eastern Antarctic is performed. The total ice discharge in the sector from  $160^{\circ}$  E. long. to  $10^{\circ}$ E. long. must amount to about 1,300  $\text{km}^3$  per year (that is, the area must amount to  $4,400 \text{ km}^2$ , if the mean thickness of the ice cover amounts to 300 m). The calculation applied to the Drigal'skiy island yields: the velocity in the outer zone of the dome amounts to about 24 m annually, the discharge of ice  $0.2 \text{ km}^3$  annually.

V.A.R.

Card 2/2

4

KAPITSA, A.P.

Glaciation tendency in the Antarctic. Nauch.dokl.vys.shkoly; geol.-  
geog.nauki no.1:48-52 '58. (MIRA 12:2)

1. Moskovskiy universitet, geograficheskij fakul'tet, kafedra  
geomorfologii.  
(Antarctic regions—Glaciers)

KAPITSA, A.P.

Glaciological investigations undertaken by the first Soviet  
Antarctic Expedition in 1956 and 1957. Geog. i khox. no.1:  
49-52 '58. (MIRA 12:1)  
(Antarctic regions--Ice)

KAPITSA, A.P., kand.geograf.nauk

Determining the rate of movement of outlet glaciers by the corrugation of fast ice. Inform.biul.Sov.antark.eksp. no.1:53-55  
'58. (MIRA 12:8)

1. Moskovskiy gosudarstvenny universitet, geograficheskiy  
fakul'tet.  
(Antarctic regions--Glaciers)

AUTHOR:

Kapitsa, A.P.

TITLE:

SOV-5-58-2-43/43

The Dynamics of Glacial Covers of the Antarctic in the Area  
of Operation of the Joint Antarctic Expedition of the AS USSR  
(Dinamika lednikovogo pokrova Antarktidy v rayone rabot  
kompleksnoy antarkticheskoy ekspeditsii Akademii nauk SSSR)

PERIODICAL:

Byulleten' Moskovskogo obshchestva ispytateley prirody -  
Otdel geologicheskiy, 1958, Nr 2, pp 167-168 (USSR)

ABSTRACT:

Data obtained by the author during the first Soviet joint  
Antarctic expedition of the AS USSR in 1956-57, led to the  
establishment of five different types of glaciers in the  
Queen Mary and Wilhelm II territories: 1) the intra-continental  
glacial plateau; 2) the coastal hilly glacial plain; 3) dis-  
charging glaciers (Khelen, Denmania and Skotta); 4) shelf  
glaciers (Sheklotona, Zapadnyy); 5) glacial islands cupolas  
(Drigal'skiy, Mill, Boumen).

1. Glaciers--Antarctic regions    2. Glaciers--Classification  
3. Dynamics

Card 1/1

USCOMB-DC-60018

KAPITSA, A.P.

Dynamics of the marginal zone of the Antarctic glacial cover within  
the region covered by the work of the Soviet Antarctic Expedition,  
1955-1957. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 13  
no. 1:209-220 '58. (MIRA 11:7)

1. Moskovskiy gosudarstvennyy universitet, Kafedra geomorfologii.  
(Antarctic regions--Glaciers)

*KAPITSA A.P.*

AUTHOR:

Dolgushin, L.D.; Vtyurin, B.I.; Model', Yu.M.; and Kapitsa,  
A.P. 12-90-2-2/3D

TITLE:

The Preliminary Results of the Glaciological Investigations  
of the First Soviet Continental Expedition to the Antarctic  
(Predvaritel'nyye rezul'taty glyatsiologicheskikh issledo-  
vaniy pervoy sovetskoy kontinental'noy ekspeditsii v Ant-  
arktide)

PERIODICAL:

Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva, 1958,  
Vol 90, Nr 2, pp 118-133 (USSR)

ABSTRACT:

The USSR Academy of Sciences undertook an Antarctic expedition in 1956 - 57. The coast of the Antarctic continent between 74° and 110° (eastern longitude) was explored for a distance of 2,000 km. Investigations included aerial observations over a total distance of 50,000 km. The authors give detailed descriptions of glaciological investigations which were concentrated on the following subjects: 1) the ice cover and glacier morphology in the eastern Antarctic according to topography, increase and decrease of glaciers; 2) the snow-accumulation processes, the dynamics, nature and properties of the snow cover; 3) the temperature conditions of snow, ice and upper layer of the Earth crust; 4) the composition and structure of the ice covers and shelf glaciers; 5) the thickness of ice covers, shelf

Card 1/2

The Preliminary Results of the Glaciological Investigations of the First  
Soviet Continental Expedition to the Antarctic

12-90-2-2/30

glaciers and ice domes; experimental ice borings; 6) glacier movement speeds, iceberg formation processes and geological activity of glaciers. There are 6 photographs, 1 map and 5 schematic drawings.

AVAILABLE: Library of Congress

Card 2/2      1. Geophysics    2. Ice-Antarctic-USSR    3. Snow-Antarctic-USSR

## PLEASE I WANT EXPLANATION

507/4379

Polaris continental shelf expedition, 1955-1957.

Continental Expedition, 1955-1957. Pt. 1: scientific results (Part

Marine transport). 1957. 161 p. 2,000 copies printed. (Printed

November, '57)

Sponsoring Agency:

Antarctic &amp; International Antarctic Research Institute

Author:

Dr. J. R. Dunn, Director of Geophysical Sciences) Tech. Ed., L.P. Brewster,

PURPOSE: This book is intended for polar specialists, geographers, geologists,

archeologists, and geomorphologists.

CONTENTS: This book is volume 2 of a multi-volume work containing scientific data

gathered during the expedition of the Antarctic (1955-1957) in part or full by members

of the U.S. Antarctic Research Institute. The purpose of the expedition was to survey the

entire Polaris continental shelf area (an area of about 1

million square kilometers), to develop methods and techniques for field studies

of the physical processes of the sea, ground and aerial observations were conducted

on three routes of traverse across and between Murry and Franklin. In

Argentina, Iceland, and Canada (Vancouver, Gaspé, etc.). Geological,

geophysical, and hydrographical observations were made at the Murry Observatory,

Chile, Peru, and Ecuador. Meteorological observations were made at Chile, Argentina,

Peru, Chile, Argentina, and Brazil. Meteorological characteristics of the glacier

ice sheet of East Antarctica were determined.

CONTENTS: Ice Regime of the Davis Sea and Adjacent Regions of the

Antarctic, T.O. Biogeographical Characteristics of the Expedition's Area of

Action, G.V. Atmospheric Characteristics

and Topographic Profile in the Region of Murry

Region of Murry, P.L. and F.J. Preliminary Investigation of Tectonic Currents in the

Region of Murry, A.J. Seismic Observations in Murry

Palmer, E.R. Physical Profiles in East Antarctica

Avalanche, Library of Congress (1960-1961)

157

KAPITSA, A.P., kand.geograf.nauk

Recent data on the thickness of the ice sheet on the central regions  
of Antarctica. Inform. biul. Sov. antark. eksp. no.19:10-14 '60.  
(MIRA 13:9)

1. Moskovskiy gosudarstvennyy universitet.  
(Antarctic regions—Ice) (Isostasy)

KAPITSA, Andrey Petrovich, kand. geogr. nauk; SMIRNOVA, N.P., red.;  
ATROSHCHENKO, L.Ye., tekhn. red.

[Is Antarctica a continent? (Explorations of polar countries)]  
Materik li Antarktida? (Issledovaniia poliarneykh stran). Mo-  
skva, Izd-vo "Znanie," 1961. 43 p. (Vsesoiuznoe obshchestvo  
po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.12,  
Geologija i geografija, no.10) (MIRA 15:2)  
(Antarctic regions)

KAPITSA, A.P.; VORONOV, P.S., kand. geologo-mineral. nauk, red.;  
FILIPPOV, A.K., red.; DROZHZHINA, L.P., tekhn. red.

[Transactions of the Soviet Antarctic Expedition, 1955]  
Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955-. Lenin-  
grad, Izd-vo "Morakoi transport." Vol.18. [Dynamics and  
morphology of the ice cap in the central sector of eastern  
Antarctica] Dinamika i morfologiya lednikovogo pokrova  
tsentral'nogo sektora Vostochnoi Antarktidy. Pod red. P.S.  
Voronova. 1961. 92 p. (MIRA 15:3)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.  
(Antarctic regions—Ice)

KAPITSA, Andrey P., SOROKHTIN, Oleg G.,

"On errors in interpretation of reflection seismic sheeting in the Antarctic"

Report to be submitted for the 13th General Assembly, INTL. Union of Geodesy  
and Geophysics (IUGG), Berkeley Calif., 19-31 Aug 63

KAPITSA, A.P.

Thickness of the ice cover of the central regions of eastern Antarctica.  
Geofiz. biul. no.13:57-64 '63.  
(MIRA 17:2)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520430002-5

KAPITSA, A.P., kand. geograf. nauk

Nature of central Antarctica; recent explorations of Soviet  
scientists. Priroda 53 no.9:46-56 '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520430002-5"

KAPITSA, A.P., kand. geograf. nauk

Trip along the route Vostok-Pole of Inaccessibility-Molodeschnaya  
in 1964. Inform. biul. Sov. antark. eksp. no. 51:13-18 '65.

1. Moskovskiy gosudarstvennyy universitet.  
(MIRA 18:9)

ZOTIKOV, I.A., kand. tekhn. nauk; KAPITSA, A.P., kand. geograf. nauk;  
SOROKHTIN, O.G., kand. fiziko-matem. nauk

Thermal regime of the ice sheet of central Antarctica. Inform.  
biul. Sov. antark. eksp. no.51:27-32 '65. (MIRA 18:9)

1. Devyataya sovetskaya antarkticheskaya ekspeditsiya (for  
Zotikov, Sorokhtin). 2. Moskovskiy gosudarstvennyy universitet  
(for Kapitsa).

ACC NR: AP7013715

SOURCE CODE: UR/0004/66/000/012/0006/0008

AUTHOR: Kapitsa, A. (Doctor of Geographical Sciences)

ORG: none

TITLE: What is hidden by the antarctic glacier?

SOURCE: Znaniye-sila, no. 12, 1966, 6-8

TOPIC TAGS: glaciology, map, physical geology

SUB CODE: 08

ABSTRACT:

The complexities and importance of study of the glacier cover of Antarctica are briefly reviewed in this article, which is accompanied by a large colored map of the subglacial relief of Antarctica which has been reproduced from the Atlas of Antarctica. It is noted that the Faye anomalies in Antarctica are close to zero. The glacial load has resulted in a downwarping of the crust. Glacial isostasy exists and the subsidence of the crust must be 850 m. Knowing the thickness of the ice cover it now has been possible to compute the downwarping in different parts of Antarctica and also determine the elevation of the relief when there was no glacier and what would result if the entire ice cover of

Cord 1/2

0933 2183

Cord 2/2

SHOSTAK, Afanasiy Grigor'yevich; KISELEV, V.M., gornyy inzh., retsenzent;  
KAPITSA, F.A., retsenzent; POKROVSKIY, M.A., red.; PARTSEVSKIY,  
V.N., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Developing iron ore deposits in the Krivoy Rog Basin] Razrabotka  
shleserudnykh zaleshei v Krivoroshkom basseine. Moskva, Gos.  
nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959.  
534 p.

(Krivoy Rog Basin--Iron mines and mining)

(MIRA 12:3)

KAPITSA, L.M.; KOPYLOVA, K.P.

Tissue therapy of intractable ulcers. Vest.khir.Grekova 70 no.6:  
27-33 1950.  
(CLML 20:5)

1. Of the Clinic of Restorative Surgery of State Order of Lenin  
Institute for the Advanced Training of Physicians imeni S.M.Kirov  
(Head of Clinic--G.Ya.Bshteyn) and of Oblast Clinical Hospital of  
Leningrad Oblast Public Health Department (Head--K.P.Kopylova).

LINDENBAUM, I.S., KAPITEA, L.M.

Myoplasty in osteomyelitis. Vest. Khir., Moskva 73 no.5:  
17-19 Sept-Oct 1953.  
(CML 25:5)

1. Of the Division of Restorative Surgery (Head -- Docent  
I.S. Lindenbaum) of Leningrad Oblast Hospital for Invalids  
of the Fatherland War.

KAPITSA, L.M.; FEDOROV, A.D.

Effect of radioactive phosphorus isotopes on the consolidation  
of fractures. Vest.khir.74 no.7:20-26 O-M '54. (MLRA 8:10)

1. Iz 3-y kafedry khirurgii (sav.-prof. N.I.Blinov) i kafedry  
radiologii (sav.-prof. M.N.Pobedinskiy) Lenin-gradskogo  
gosudarstvennogo ordena Lenina instituta usovershenstvovaniya  
vrachey im. S.M.Kirova. Adres L.M.Kapitsa; Leningrad 2, Ul.  
Pravdy, d.5, kv.3.

(FRACTURES, experimental,  
eff. of radiophosphorus)  
(PHOSPHORUS, radioactive,  
eff. on exper.fract.)

Effect of radioactive isotopes of strontium on bone fracture consolidation. L. M. Kapitsa and A. D. Fedorova (S. M. Kirov Inst. Advanced Med., Moscow). *Vestn. Radiogol. i Radiol.* 31, No. 3, 18-21 (1956).—Intravenous administration of radiostrontium results in its uptake in the bones predominantly at the site of newly forming bone; the result is the stimulation of regeneration of bone tissue and accelerated consolidation of the fracture. Min. doses were used (1.6 microcuries/kg.). G. M. Kosolapoff

KAPITSA, L.M. (Leningrad, Chernoretskiy per., d.4/6, kv.5)

Omentocardiopexy as a method for experimental revascularization of the myocardium [with summary in English, p.159]. Vest.khir. 78 no.5:66-71  
My '57.  
(MIRA 10:7)

1. Is 3-y khirurgicheskoy kafedry (zav. - prof. N.I.Blinov) i kafedry operativnoy khirurgii (zav. - prof. A.P.Madein) Leningradskogo ordena S.M.Kirova.

(MYOCARDIUM, surg.

expér. omentocardiopexy as method for revascularization)  
(OMMUTUM, surg.

expér. omentocardiopexy as method for myocardial revascularisation)

KAPITSA, L.M., kand.med.nauk; FE DOROVA, A.D., kand.med.nauk; CHISTYAKOVA,  
V.G.

Ligation of the coronary vessels under experimental conditions.  
Sbor. nauch. trud. GIDUV no. 14:84-86 '58. (MIRA 13:10)

1. Iz kafedry operativnoy khirurgii (zav. prof. A.P. Nadein),  
III kafedry khirurgii (zav. prof. N.I. Blinov) I kafedry terapii  
(zav. prof. B.M. Prozorovskiy) gosudarstvennogo instituta dlya  
usovershenstvovaniya vrachey.

(CORONARY VESSELS—LIGATION (SURGERY))

KAPITSA, L.M.

Revascularization of the myocardium by implantation of the internal  
mammary artery subpericardially in experiment. Vest. khir. 85  
no. 8:38-42 Ag '60. (MIRA 14:1)  
(MYOCARDIUM—BLOOD SUPPLY) (BREAST—BLCOOD SUPPLY)

KAPITSA, L. M. (Leningrad, Chernoretskiy per., d. 4/6, kv. 5)

Left serous perinephritis. Vest. khir. no. 4:95-96 '62.

(MIRA 15:4)

1. Iz kliniki 3-y kafedry khirurgii (zav. - prof. N. I. Blinov)  
Leningradskogo ordena Lenina instituta usovershenstvovaniya  
vrachey im. S. M. Kirova.

(KIDNEYS--DISEASES)

KAPITSA, L.M.

Ligation of the large cardiac vein and pericoronal  
neurectomy in experimental myocardial infarct. Eksper.  
khir. i anest. 7 no.5:23-24 S-O '62. (MIRA :7:10)

1. Iz kafedry operativnoy khirurgii (zav.- prof. A.P. Nadein)  
i III kafedry khirurgii (zav.- prof. N.I. Blinov) Leningrad-  
skogo ordena Lenina instituta usovershenstvovaniya vrachey  
imeni Kirova.

ABRAMOV, Sh.I., prof.; BAIROV, G.A., prof.; BLINOV, N.I., prof.;  
GADZHIYEV, S.A., prof.; GODUNOV, S.F., prof.; GOMZYAKOV,  
G.A., prof.; DEMIN, V.N., prof.; ZVORYKIN, I.A., prof.;  
KAPITSA, L.M., kand. med. nauk; MOKROVSKAYA, S.P., kand.  
med. nauk; POSTNIKOV, B.N., prof.; PORKSHEYAN, O.Kh.,  
prof.; SIDORENKO, L.N., kand. med. nauk; TAL'MAN, I.M.,  
prof.; FEDOROVA, A.D., kand. med. nauk; FILATOV, A.N.,  
prof.; KHROMOV, B.M., prof.; SARKISOV, M.A., red.

[Errors, hazards and complications in surgery] Oshibki,  
opasnosti i oslozhneniya v khirurgii. Leningrad, Me-  
ditsina, 1965. 563 p.  
(MIRA 18:7)

REF ID: A67585 RWT(d)/RWT(m)/EIP(c)/T/SWP(1) PR-74  
ACCESSION NR AR5008893 S/0273 6.1.1982 0027-027

DATE Ref zh Dvigately vnutrennego sgoraniya Otd. imp. Akad. S. N. Ioffe

AUTHOR Ventsel', S. V.; Voloshin, N. P.; Levchenko, P. N.; Karpitsa, I. N.; Garbuz,

TITLE An experiment in engine operation without changing the engine oil

CITED SOURCE: Avtodorozhnik Ukrayny. Nauchno-tekhn-tekhn. sb., vyp. 2(16) 1964,  
20-02

TOPIC TAGS: automotive engine performance, oil change, oil consumption, Volga automobile, internal combustion engine/oil SU

TRANSLATION: The authors present the results of engine performance tests on Volga automobiles, carried out to verify the effect of engine oil changes on oil consumption and the technical condition of an engine. The oil in one group of engines was replaced after every 3000 km while the other group operated without oil changes. The test was conducted throughout the year. Oil consumption was measured throughout the year. The results of the experiments showed that the oil consumption of the engines

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valves and piston rings. The performance of new and rebuilt engines did not differ.

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Card 2/2

SOV/109-3-8-5/18

AUTHORS: Kapitsa, M.L., Mel'nikov, A.I., Morozov, A.V., Popov, P.N.,  
Sobolevskaya, R.B., Tsarev, B.M. and Shul'man, A.R.

TITLE: Thermionic Properties of Barium Tungstate (Termo-elektronnyye svoystva volframata bariya)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8,  
pp 1010 - 1016 (USSR)

ABSTRACT: The work described was concerned with the investigation of the thermionic emission of barium tungstate and  $Ba_2CaWO_6$ . The investigation was undertaken since it was thought that the resulting data might be useful in explaining the operation of the pressed cathodes and other cathodes which contain barium tungstate. The investigations were carried out on directly heated cathodes which were based on tungsten and molybdenum cores. The measurements were made on special experimental diodes, fitted with protective anodes. The cathode temperature was determined by measuring the change in the resistance of the core. All the measurements were done under static conditions. The coating of  $Ba_3WO_6$  and  $Ba_2CaWO_6$  were effected by two methods: a) a filament of the

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Thermionic Properties of Barium Tungstate

SOV/109-3-8-5/18

core metal was passed through a drop of the coating substance mixed with a binder; b) cataphoretic coating was used. In the first case, coarse-grain coatings were obtained, while the second method permitted obtaining the particles having a diameter of about 1 - 5  $\mu$ . The cathodes were de-gassed by heating up to 1 250 °K for the duration of 1 - 2 hours without taking any current.

This processing resulted also in a partial activation of the cathodes. Further activation of the cathodes (by heating and taking the current) was then carried out. During the preliminary activation, it was found that the work function (as measured from the Richardson curves) was of the order of 2.2 eV, while after the final activation, the work function dropped to 1.2 - 0.5 eV. The characteristics of a barium-tungstate cathode after final activation are shown in Figure 2. The emission current and the work function of the same cathode for various activating temperatures are given in Table 1. On the other hand, it was found that the cathodes of  $Ba_2CaWO_6$  had very low emission densities. These were of the order

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Thermionic Properties of Barium Tungstate      SOV/109-3-8-5/18

$\mu\text{A}/\text{cm}^2$ , as can be seen from Table 2. By comparing the results of Table 2 with those for  $\text{Ba}_3\text{WO}_6$  (given in Table 3), it is seen that the emission of the latter is about 100 times higher than that of the former. It was found that the curve:

$$\lg \frac{I}{T^2} = f\left(\frac{1}{T}\right)$$

for the cathode of barium tungstate consists of three regions (Figure 4). At low temperatures (below 900  $^{\circ}\text{K}$ ), the curve has the highest slope; the work function in this region is equal to 1.3 eV. In the regions of temperatures from 900 - 1 250  $^{\circ}\text{K}$ , the work function has a value of about 0.6 - 0.7 eV. Finally, at temperatures above 1 250  $^{\circ}\text{K}$ , the current decreases as a function of temperature and the slope of the curve cannot be regarded as representing the work function.

Card 3/4

Thermionic Properties of Barium Tungstate SOV/109-3-8-5/18

There are 5 figures, 5 tables and 4 references, 3 of which  
are Soviet and 1 English.

SUBMITTED: January 29, 1958

Card 4/4      1. Barium tungstates--Properties    2. Thermionic emission--Analysis  
                  3. Cathodes--Performance

BAZHANOVA, N.P. [translator]; FRIDRIKHOV, S.A. [translator]; KAPITSA,  
M.L. [translator]; LEPSHINSKAYA, V.N. [translator]; SHUL'MAN,  
A.E., red.; POPOV, R.Yu., red.; KLIMENTKO, S.V., tekhn.red.

[Characteristic energy losses of electrons in solids; collection  
of articles] Kharakteristicheskie poteri energii elektronov  
v tverdykh telakh; sbornik statei. Moscow, Izd-vo inostr.lit-ry,  
1959. 270 p. (MIRA 12:7)

1. Sotrudniki kafedry elektroniki Leningradskogo politekhnicheskogo  
instituta (for Bazarova, Fridrikhov, Kapitsa, Lepashinskaya).  
(Electrons)

81365

S/181/60/002/03/23/028  
B006/B017

247700

AUTHORS: Kapitsa, M. L., Fridrikhov, S. A., Shul'man, A. R.TITLE: Characteristic Energy Losses in the Reflection of Electrons  
From Single Crystals of Alkali Halide Compounds

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 3, pp. 517-523

TEXT: In a previous paper (Ref. 5) the two last-mentioned authors had already investigated inelastic electron reflection from alkali halide crystals, and they had found that the energy spectrum of secondary electrons (which are emitted by alkali halide single crystals) showed fine structure (Fig. 1 shows such a spectrum recorded on NaCl with a primary electron energy of  $V_p = 30$  ev). Such curves were also recorded on KCl, KBr, KI, and LiF. It was the aim of the present paper to conduct analogous investigations with higher accuracy and with small  $V_p$  in order to find the lower boundary of primary electron energy at which peaks of the characteristic losses can still be perceived in the secondary electron spectrum; furthermore, an attempt was made to separate the two possible

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Characteristic Energy Losses in the  
Reflection of Electrons From Single Crystals  
of Alkali Halide Compounds

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B006/B017

systems of maxima (the so-called right system of primary electrons and the left system of secondary electrons; the position of the maxima of the latter is independent of  $V_p$ ). The measuring technique is described in detail. The spectrum was measured automatically at a target temperature of 300 - 350°C, a primary current density of  $10^{-7} \text{ A/cm}^2$ , and a pressure of  $\sim 2 \cdot 10^{-7} \text{ torr}$ ;  $V_p$  was between 0.5 and 50 ev. Fig. 3 shows the spectra of the electrons reflected from NaCl single crystals at  $V_p = 30, 32$ , and 34 ev. The two systems of maxima can be clearly seen. Fig. 4 shows spectra of electrons reflected from NaCl at  $V_p = 5, 7, 9, 11$ , and 13 ev, and Fig. 5 depicts the spectrum at  $V_p = 21.5$  ev. Important loss peaks occurred only at  $V_p > 7$  ev. The peaks correspond to energy losses of about 1 - 1.2, 1.7 - 2, 2.6 - 2.8, 3.8 - 4.3, 5 - 5.4, 6 - 6.7, 7.5 - 8.1, 9 - 9.6, and 11 ev. The probability of higher energy losses rises with increasing  $V_p$ . The fine structure proved to be characteristic of the substance investigated. In conclusion, the results are discussed. Although the right system of maxima can be clearly attributed to the characteristic energy losses of electrons, the nature of the left system, however, needs further

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Characteristic Energy Losses in the  
Reflection of Electrons From Single Crystals  
of Alkali Halide Compounds

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B006/B017

investigations. A relationship could be observed between the energy losses below 12 ev and optical data (cf. Table). Furthermore, it was established that the least primary electron energy at which characteristic energy losses still occurred (7 ev) was smaller than the width of the forbidden zone. There are 5 figures, 1 table, and 14 references: 4 Soviet, 6 US, 2 Japanese, 1 British, and 1 German.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad  
Polytechnic Institute)

SUBMITTED: June 6, 1959

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Card 3/3

ASTAPENKO, P.; AL'T, Zh. [Alt, J.]; ROPAR, N.; BUGAYEV, V.A., otd.red.;  
KAPITSA, M.F., red.; MAKUNI, Ye.V., tekhn.red.

[Some aspects of atmospheric circulation in Antarctica in 1958]  
Nekotorye voprosy tsirkulyatsii atmosfery v Antarktike v 1958 g.  
Moskva, Izd-vo Akad.nauk SSSR, 1960. 128 p. (II rasdel programmy  
MGG (meteorologiya), no.2). (MIRA 13:12)

1. Leningrad Hydrometeorological Institute, U.S.S.R. (for Asta-  
penko). 2. Météorologie National, France (for Al't). 3. U.S.  
Weather Bureau, Washington (for Roper).  
(Antarctica--Atmosphere)

ASTAPENKO, P.D.; ZVEREV, A.S., doktor geograf.nauk, otd.red.; KAPITSA,  
M.P., red.; POLYAKOVA, T.V., tekhn.red.

[Atmospheric processes in high latitudes of the Southern Hemisphere]  
Atmosfernye protsessy v vysokikh shirotsakh iushnogo polushariia.  
Moskva, Izd-vo Akad.nauk SSSR, 1960. 281 p. (II rasdel programmy  
MGG (meteorologiya), no.3)  
(Antarctica--Atmosphere) (MIRA 13:12)

KAPITSA, M.L.; FRIDRIKHOV, S.A.; SHUL'MAN, A.R.

Characteristic energy losses arising in the reflection of electrons  
from single crystals of alkali halides. Fiz. tver. tela 2 no.3:517-523  
Mar '60. (MIRA 14:8)

1. Leningradskiy politekhnicheskiy institut.  
(Electrons--Spectra)  
(Alkali metal halides--Electrical properties)

86435

9.4166 (3201, 1003, 1137)

S/181/60/002/011/021/042  
B006/B056

AUTHORS: Shul'man, A. R., Kapitsa, M. I., Nemchenok, R. L., and Zelenetskaya, Ye. V.

TITLE: Photoelectric Emission of the Systems W-BaO and W-Ba

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 11, pp. 2805-2812

TEXT: The authors' aim was a comprehensive investigation of the photoelectric properties of the W-BaO and W-Ba systems, a comparison of the properties of these two systems, and a study of the nature of the photoeffect of these systems. First of all, the measuring method is described, Fig. 1 gives a schematic representation of the device working in plane geometry. Figs. 2 and 3 show typical spectral characteristics of W-BaO systems. On the whole it could be observed that the quantum yield increases monotonically with the layer thickness. In the series of measurements illustrated in Fig. 3, however, this was not the case, which may be explained by the somewhat less favorable vacuum conditions. The work function of the tungsten backing ( $10 - 25\mu$ ) measured by the Fowler method was found to be  $4.3 - 4.4$  ev, whereas the Richardson method yielded a value of  $4.5 - 4.6$  ev. The yield curves were evaluated according to Fowler, and the Card 1/5

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Photoelectric Emission of the Systems W-BaO and W-Ba <sup>86435</sup> S/181/60/002/011/021/042  
B006/B056

result (Fig. 4) is discussed. The spectral characteristics of the photo-emission of the W-Ba system take a similar course as those of W-BaO. It is, however, partly smoother and without any noticeable connection between quantum yield and layer thickness. Figs. 5 and 6 show the characteristics; those shown in Fig. 6 were recorded at a much lower rate of sputtering. Fig. 7 shows the Fowler curves which take a similar course as those of the W-BaO system. Summing up: 1) An investigation was carried out of the change in the work function (Fig. 8 shows the work function as a function of the sputtering time on a cold backing) and of the quantum yield for a thickness from 0 to 3 - 10 monomolecular layers (Figs. 2-6). 2) The spectral characteristics of the photoeffect of W-Ba are largely monotonic up to a thickness of about 10 monomolecular layers, except for a thickness of about one layer, where the characteristic takes an anomalous course. 3) The spectral characteristics of the system W-BaO showed no peculiarities for a thickness of less than one monomolecular layer, and in photoemission the photoelectrons of the metal with reduced work function play the main part. 4) For BaO coatings on a W-base with a thickness of more than one monomolecular layer, the quantum yield curves show peculiarities which cannot be ascribed either to the properties of the W-backing nor to BaO. Thus, BaO coatings of a thickness of one or several molecules

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Photoelectric Emission of the Systems W-BaO  
and W-Ba

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B006/B056

not only cause a decrease of the work function of the metal, but also  
change the emission mechanism. Yu. S. Vedula and V. M. Gavril'yuk are  
mentioned. There are 8 figures and 9 references: 5 Soviet, 2 US, 1 Japanese,  
and 1 German.

ASSOCIATION: Politekhnicheskiy institut im. M. I. Kalinina Kafedra  
elektroniki Leningrad: (Polytechnic Institute imeni M. I.  
Kalinin, Chair of Electronics, Leningrad)

SUBMITTED: July 1, 1960

Legend to Figs. 2, 5: The numbers of the curves denote the sputtering  
time. The higher the number, the longer the duration.  
Legend to Fig. 8: 1) Source - barium beryllate,  $5 \cdot 10^{-8}$  mm Hg; 2) the same  
source,  $5 \cdot 10^{-9}$  mm Hg; 3) and 4) "Bati" source,  $5 \cdot 10^{-9}$  mm Hg.

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86435

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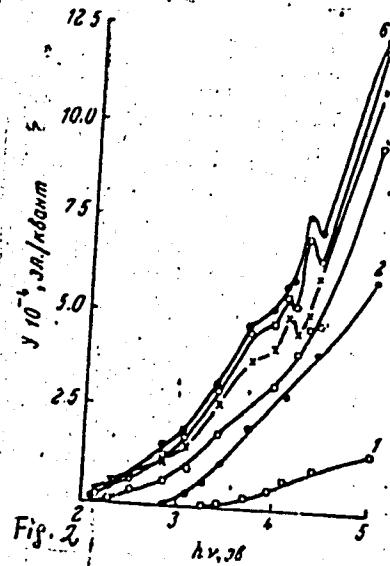


Fig. 2

Card 4/5

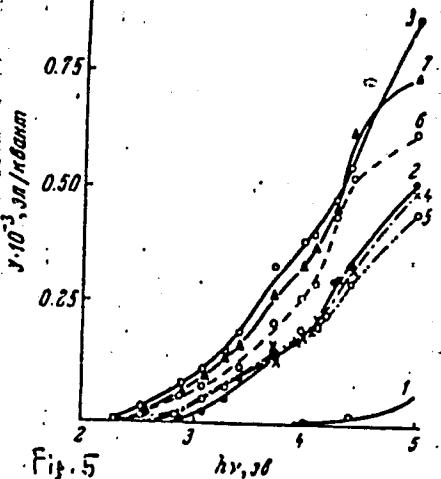
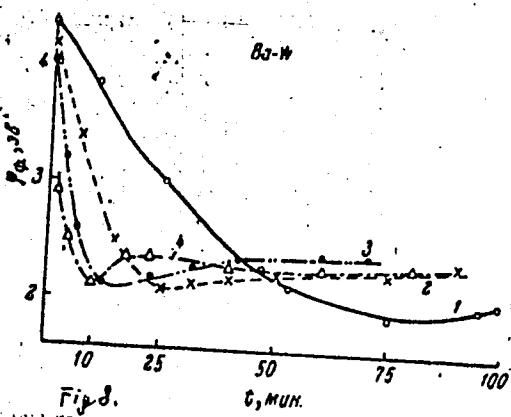


Fig. 5

S/181/60/002/011/021/042  
B006/B056



Card 5/5

9.4175 (doc 1163,1482)

30798  
5/181/61/003/011/044/056  
8104/B138

AUTHORS: Kapitsa, M. L., Neuchenok, R. L., and Filippov, Yu. Ye.  
TITLE: Spectral characteristics of the W-BaO system in polarized light

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3529-3531

TEXT: The photoactivity of the system W-BaO was measured in polarized light on barium oxide evaporated onto a tungsten film (99.95% W, 0.029% Mo), and the temperature time dependence of the spectral characteristics were determined. The specimens were heated to 1200°K and the measurements were made with a glass-prism monochromator with a dispersion of 2 to 6 mm/mm at 2 to 3 ev. Light from a filament lamp was polarized by MMH-8 (MIN-8) filters. Light rays from the monochromator were directed onto the target ✓  
of the vacuum tube at an angle of 45°. Vacuum pressure was not more than  $5 \cdot 10^{-9}$  mm Hg. Distinct polarization selectivity was found for BaO films from 0.7 to about 4 monolayers thick. The quantum yield of the photocurrent in natural light is mainly determined essentially by the light

Card 1/KZ

KAPITSA, M.L.; NEMCHENOK, R.L.; FILIPPOV, Yu.Ye.

Spectra characteristics of the system W - BaO in polarized light.  
Fiz.tver.tela 3 no.11:3529-3531 N '61. (MIRA 14:10)

1. Leningradskiy politekhnicheskiy institut im. M.I.Kalinina.  
(Tungsten--Spectra) (Barium oxide--Spectra)

KAPITSA, M.L.; GRIGOR'YEV, L.M.; IVANOV, A.V.

Spectral characteristics of the system W - Ba in polarized light.  
Fiz. tver. tela 5 no.11:3349-3350 N '63. (MIRA 16:12)

1. Leningradskiy politekhnicheskiy institut imeni Kalinina.

ALIKSANDROW, P.A., kand.arkhitektury; GROMOVA, N.M., kand.farmatsevticheskikh  
nauk; KAPITSA, N.K., arkitektor; SAMSONOV, G.A., arkitektor;  
DANOVSKIY, V.F., arkitektor, nauchnyy red.; OSKLEDETS, Z.M., red.  
izd-va; GILMSON, P.G., tekhn.red.

[Auxiliary therapeutic departments of general hospitals; manual on  
the planning of pharmacies, laboratories, and physical therapy  
departments] Lechebno-vspomogatel'nye otdeleniya bol'nits obshche-  
go tipa; posobie dlia proektirovaniia aptek, laboratori, fizio-  
terapevticheskikh otdelenii. Moskva, Gos.izd-vo lit-ry po stroit.,  
arkhit. i stroy.materiam, 1960. 122 p. (MIRA 14:2)  
(HOSPITALS--CONSTRUCTION)

KAFITSA, O. S.

"Adequate Mutability of the Virus of Tobacco Mosaic Due to the Effect of Increased Temperatures." Cand Biol Sci, Inst of Genetics, Acad Sci USSR, 11 Dec 54. (VM, 1 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

✓ 6781. Adenovirus variability of tobacco mosaic virus under influence  
of raised temperature. O. S. Keddie. Tech. Inst. Center, 1955.

No. 22, 181-207. Report 24. 1954. 1955. 44 pp.

Method has been developed to measure the inherent variability of tobacco mosaic virus and the inherent variability of adenovirus.

Adenovirus is more variable than tobacco mosaic virus.

1955.

✓ 6782. Adenovirus strains isolated from patients with respiratory diseases.

1955.

1955.

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000520430002-5

6730 Growth

(9-48 hr., according to various authors) Using treatment of  
leaves after inoculation with a strain of *K. min.*, it was found that  
in the course of the first 12 hours there was a marked increase in  
the number of spores.

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CIA-RDP86-00513R000520430002-5"

## USSR/Virology - Plant Viruses.

E-1

Abs Jour : Ref Zhur - Biol., No 8, 1958, 33536

Author : Sukhov, K.S., Kapitsa, O.S.

Inst :

Title : (Napravленная изменчивость х-вируса картофеля при смешанной инфекции с вирусом табачной мозаики).  
A Directed Change of Potato X-Virus in Mixed Infections with Tobacco Mosaic Viruses.

Orig Pub : Izv. AN SSSR, Ser. biol. 1956, No 3, 53-64

Abstract : It was clarified that a change in viruses may occur in a mixed infection by unrelated viruses, which do not produce crossing serological reactions. In a joint cultivation of a cyphomandrate strain of tobacco mosaic virus with a potato X-virus ( $X_2$ ), a strain of potato virus formed ( $X_3$ ) which differed from the initial one, caused severe symptoms on tobacco, stramonium and

Card 1/2

*Inst. Genetics Acad Sci USSR*

USSR/Virology - Plant Viruses,

E-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, 47771

Author : Sukhov, K. and Kapitsa, O.S.

Inst : Genetics Institute of the Academy of Sciences USSR.

Title : Directed Variation of Potato Virus X During Mixed Infec-  
tion with Tobacco Mosaic Virus.

Orig Pub : Trudy Inst Genet Akad Nauk SSSR, No 23, 283-295 (1956)

Abstract : Mixed infection produced by the addition of potato virus X and of cytomandric tobacco mosaic virus (TMV) have been studied. Young tobacco leaves were infected with a mixture of both strains. As a result a yellow colored mosaic was observed to be formed in the growing leaves; the mosaic is markedly more expressed than in the case of infection with the cytomandric strain alone. Inclusion bodies of both strains

Card 1/2

*(KAP)*; *Kapitza, O.S.*  
**SUKHOV, K.S.; KAPITSA, O.S.**

*Discovery of a "noninfectious" phase in the development of  
the tobacco mosaic virus. Dokl. AN SSSR 110 no.3:469-471  
S '56.* (MLRA 9:12)

1. Institut genetiki Akademii nauk SSSR. Predstavleno  
akademikom A.I. Oparinym.  
**(MOZAIC DISEASE)**

KAPITSA, O.S.

AUTHOR: SUKHOV, K.S., KAPITSA, O.S. 20-6-52/59  
TITLE: The Morphology of "Uninfectious" Particles of Tobacco Mosaic Virus in a State of Incomplete Development. (Morfologiya ne zavershivshikh razvitiya "neinfektsionnykh" chastits virusa tabachnoy mozaiki, Russian)  
PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 6, pp 1366-1368 (U.S.S.R.)  
ABSTRACT: Lately the authors published a work on the determination of a latent period of tobacco mosaic virus. In the course of this period the propagation of the virus takes place. The virus particles present in this period lack the capability of contaminating other susceptible plants by mechanic inoculation. This characteristic probably depends on its unsteadiness of inoculum conditions. The transition of the virus from the propagation period to a period of rest, when the particles are infectious for other plants, was suppressed by the influence of a raise of temperature ( $36^{\circ}$ ) in the case of the experiments carried out by the authors. The propagation centers of the virus were easily noticeable as round green leaf-spots which were darker than their surroundings. The infection virus develops 19 - 20 hours after inoculation of the upper epidermis. The non-infectious virus develops in the lower epidermis already 10 hours after the inoculation of the upper epidermis. Both sources were investigated by means of an electron microscope. On preparations

Card 1/2

The Morphology of "Uninfectious" Particles of 20-6-52/59  
Tobacco Mosaic Virus in a State of Incomplete Development.

from the green dark spots, after their storing in a thermostat, particles became visible which were clearly different from those of the infectious virus. The pictures observed make it possible to conclude that fibrillary formations can be observed in the material of the infected tissue in the latency period of tobacco mosaic infection when the development of the virus takes place. They apparently depend on a period of development. The differences of length of the fibrillaries lead to the supposition that the growing of the mass of the noninfectious virus takes place as a consequence of the longitudinal growth of the fibrillaries. The formation of rod-type particles of the infection virus is probably connected with the consecutive fragmentation of the fibrillaries and their spiraling. Spiraling-pictures could often be observed. This phenomenon may explain the increase of the diameter of the fully developed particles of the infection virus as well as the change of its antigenous characteristics.

(1 illustration, 6 microphotographs, 1 Slavic reference)

ASSOCIATION: Institute for Genetics of the Academy of Science of the U.S.S.R.

PRESENTED BY: A.L.KURSANOV, Member of the Academy

SUBMITTED: 29.1.1957

AVAILABLE: Library of Congress

Card 2/2

SUKHOV, K.S.; KAPITSA, O.S.; MUKOZOBOVA, L.I.

Infection of roots by tobacco mosaic virus. Trudy Inst. gen.  
no.29:379-388 '62. (MIRA 16:7)

(Tobacco mosaic virus)  
(Roots(Botany)--Diseases and pests)

KAPITSA, O.S., ANDREYEVA, E.N.

Search for plants acting as reservoirs of X- and Y- potato  
viruses. Trudy Inst. gen. no.29:404-410 '62.

(MIRA 16:7)

(Virus diseases of plants)  
(Potatoes—Diseases and pests)

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SUKHOV, K.S.; IZVEKOVA, L.I.; KAPITSA, O.S.

Spread of potato virus X. Trudy Inst. gen. no.31:335-344 '64.  
(MIRA 17:9)

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Penetration of Y-virus into the tubers of originally infected  
potato plants; the early Priekule variety. Trudy Inst. gen. no.  
31: 345-358 '64. (MIRA 17:9)

KAPITSA, O.S.; ANDREYEVA, E.N.

Elimination of virus diseases from vegetatively propagated plants. Trudy Inst.gen. no.35:18-35 '65.

Preparing a serum for potato virus Y. Ibid.:115-119  
(MIRA 18:12)

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KAPITSA, Petr L., red.

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"Note on the Curved Tracks of Beta Particles," Proceedings of the Cambridge Philosophical Society, Vol. 21, pp. 129-135, 1922

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KAPITZA, P. L.

"The Possibility of Experimental Determination of the Magnetic Moment of Atoms,"  
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Petrograd Polytechnic Inst. and Cavendish Laboratory, Cambridge

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